Hawaii EUTF

January 2020

July 1, 2019 Retiree Healthcare Valuation (OPEB)

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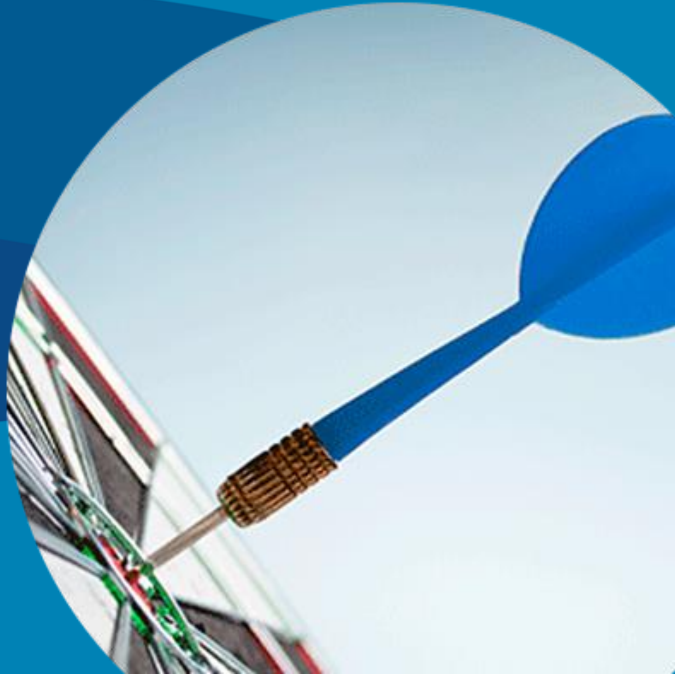

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Key Actuarial Measurements July 1, 2019

($ millions)	State of Hawaii	Honolulu w/ HART	County of Hawaii	County of Maui	County of Kauai	Kauai DOW	Honolulu BWS	Hawaii DWS
AAL	$ 11,383	$ 2,500	$595	$593	$283	$19	$161	$36
AVA	1,829	596	182	273	136	10	87	19
UAAL	$ 9,553	$1,904	$412	$320	$147	$9	$74	$16
Funded Ratio								
7/1/2015	2.4%	12.1%	19.6%	33.4%	32.0%	40.4%	37.0%	40.2%
7/1/2017	8.6%	16.6%	24.4%	39.3%	40.1%	49.0%	49.0%	46.9%
7/1/2018	12.1%	19.7%	27.3%	42.9%	43.0%	51.7%	52.2%	51.2%
7/1/2019	16.1%	23.8%	30.7%	46.0%	48.1%	54.1%	53.9%	54.5%
ARC as a % of Payroll								
FYE21	24.2%	26.7%	23.7%	19.9%	20.6%	17.6%	21.0%	19.4%
FYE22	24.4%	26.5%	24.4%	19.6%	20.8%	17.6%	21.0%	18.6%
FYE 2022 Normal Cost as a % of Payroll								
7/1/2019	6.9%	6.5%	6.9%	6.6%	6.9%	6.5%	6.4%	6.7%

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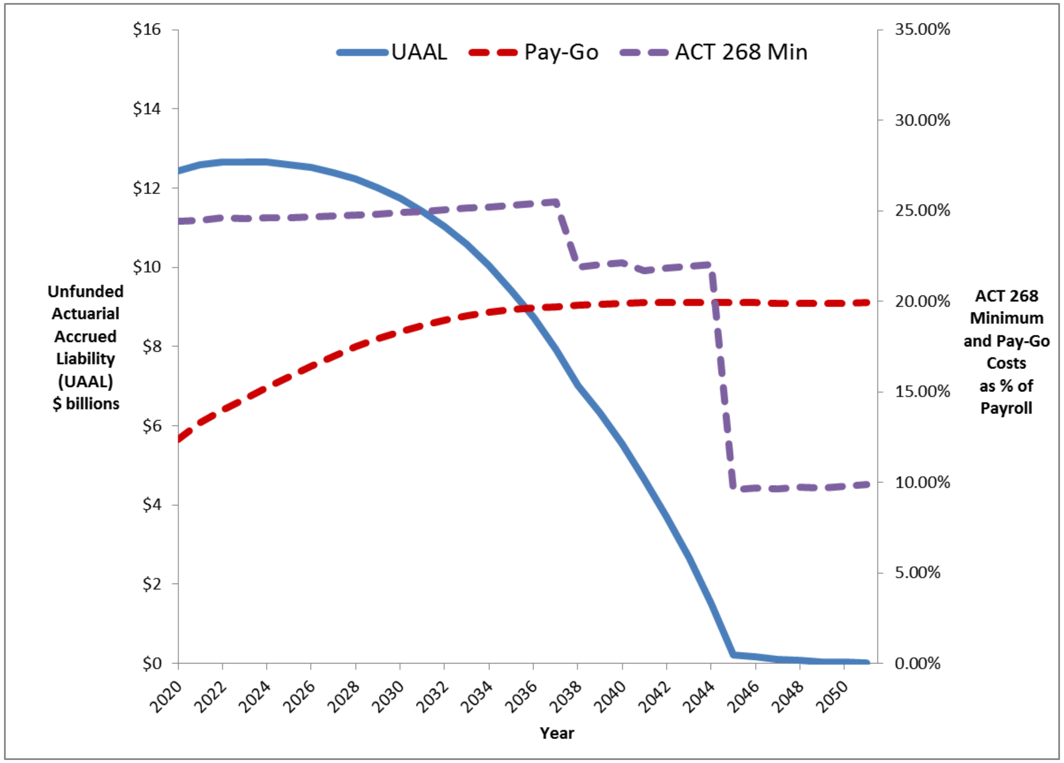
Financial Argument for Pre-Funding



Employer contributions are expected to exceed the benefit payments for the next 25 years. The additional cost of prefunding is $9.5 billion over that period. After 25 years, the plan is projected to be 99.6% funded and the assets are projected to have grown from $3.1 billion to $44.9 billion.

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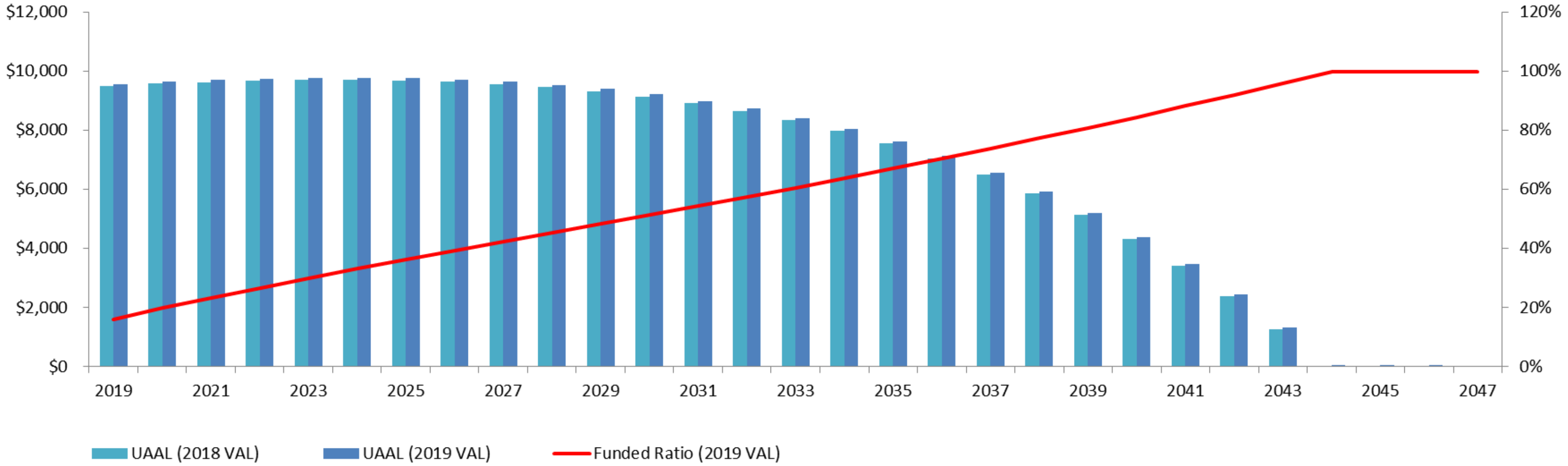
Long-term Outlook – State of Hawaii



UAAL is expected to remain fairly level in dollar terms for the near term, but decline as a ratio of payroll. The funded ratio is expected to increase by approximately 3% per year.

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Actuarial Results – All Employers Combined

Overall, the 2019 results were very consistent with the expected results from the 2018 report. The actuarial accrued liability was slightly higher than expected, mostly due to minor assumption changes. Transfers from the agency fund of $14.6 million and employer contributions of $9.8 million in excess of the required minimums helped offset the liability increase.

($ in millions)	July 1, 2018	Expected July 1, 2019	Actual July 1, 2019	$ Difference	% Difference
	(1)	(2)	(3)	(3) - (2)	(3) / (2) - 1
1. Actuarial Accrued Liability	$14,641	$15,466	$15,569	$103	0.7%
2. Actuarial Value of Assets	2,363	3,107	3,133	26	0.8%
3. UAAL (1 - 2)	$12,278	$12,359	$12,436	$77	0.6%
4. Funded Ratio (2 / 1)	16.1%	20.1%	20.1%		
5. UAAL/Payroll	279.1%	271.4%	273.5%		
For Fiscal Year	2021	2022	2022		
6. Required Contribution (ARC)	$1,143	$1,180	$1,190	$10	0.8%

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Actuarial Results – State of Hawaii Only

($ in millions)	July 1, 2018	Expected July 1, 2019	Actual July 1, 2019	$ Difference	% Difference
	(1)	(2)	(3)	(3) - (2)	(3) / (2) - 1
1. Actuarial Accrued Liability	$10,705	$11,311	$11,383	$72	0.6%
2. Actuarial Value of Assets	1,291	1,810	1,829	19	1.0%
3. UAAL (1 - 2)	$9,414	$9,501	$9,553	$52	0.5%
4. Funded Ratio (2 / 1)	12.1%	16.0%	16.1%		
5. UAAL/Payroll	289.3%	282.1%	285.0%		
For Fiscal Year	2021	2022	2022		
6. Required Contribution (ARC)	$842	$870	$877	$7	0.8%

The State contributed the minimum required contribution in FYE19. State's FYE19 transfer from agency fund was $10.7 million.

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Actuarial Results – Gains and Losses

Calculation of total actuarial gain or loss	All Employers	State of Hawaii
1. UAAL as of July 1, 2018	$ 12,278	$ 9,414
2. Normal cost, with administrative expenses	315	235
3. Interest (includes earnings on contributions)	833	639
4. Expected contributions (minimum required)	(1,068)	(787)
5. Expected UAAL as of July 1, 2019	$ 12,358	$ 9,501
6. Actual UAAL as of July 1, 2019	12,436	9,553
7. Total (gain)/loss for the year (item 6 - item 5)	78	52
Sources of gains and losses:		
8. Asset (gain)/loss for the year*	$ 14	$ 7
9. (Gain)/loss due to contributions	(25)	(11)
10. Other liability (gain)/loss	5	(4)
11. Change in assumptions**	84	60
12. Change in benefit provisions	-	-
13. Total (gain)/loss for the year	$ 78	$ 52

* Investment (gains)/losses are phased-in over a 4 year period.

** Updates reflect 2019 ERS Experience Study and small participation assumption changes.

Premium Experience

Medical + Rx + Dental + Vision	2019 Premium	Expected 2020	Actual 2020	Actual vs Expected
Post-65 HMSA	**$472**	**$517**	**$526**	**1.7%**
Post-65 Kaiser	535	586	507	(13.4%)
Pre-65 HMSA	769	844	860	1.9%
Pre-65 Kaiser	853	936	806	(13.9%)
Part B	136	141	145	2.6%

- Post-65 HMSA premiums have the largest impact
- Overall premium experience resulted in an actuarial loss of 0.4%.

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Premiums, BMC and Asset Volatility

	HMSA Post-65 Medical	HMSA Post-65 Rx	Kaiser Post-65	HMSA Pre-65 Medical	HMSA Pre-65 Rx	Kaiser Pre-65	Dental	Vision	BMC	Asset Return Market Value
2016	9.4%	16.8%	5.2%	10.8%	30.4%	6.2%	5.0%	3.0%	16.1%	3.1%
2017	5.7%	6.3%	4.2%	5.8%	12.5%	4.6%	3.7%	-2.5%	10.0%	2.6%
2018	4.6%	-24.5%	10.7%	4.6%	-18.5%	10.8%	5.6%	-7.1%	0.0%	9.5%
2019	1.3%	15.4%	1.4%	1.9%	7.3%	1.4%	1.3%	-6.5%	1.1%	7.3%
2020	9.2%	15.6%	-6.1%	9.1%	20.5%	-6.1%	5.0%	0.0%	6.7%	4.6%
5-year average	**6.0%**	**4.6%**	**2.9%**	**6.4%**	**9.1%**	**3.2%**	**4.1%**	**-2.7%**	**6.6%**	**5.4%**

Managing premium volatility:

1. With current approach, losses are amortized over 30-years
2. Adjusting short-term trend assumptions
3. What’s the best approach for smoothing premium experience?
4. We suggest direct rate smoothing of the ARC

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Contribution Sensitivity Scenarios
State of Hawaii Only

Scenario 1: 20% asset decline, followed by 7% returns

FYE	ARC (in millions)			
June 30,	Baseline	Scenario 1	$ Increase	% Increase
2023	$ 907	$ 924	$ 17	1.9%
2024	940	967	27	2.9%
2025	974	1,011	37	3.8%
2026	1,011	1,050	39	3.9%
2027	1,048	1,089	41	3.9%

Scenario 2: 3% adverse premium experience

FYE	ARC (in millions)			
June 30,	Baseline	Scenario 2	$ Increase	% Increase
2023	$ 907	$ 938	$ 31	3.4%
2024	940	972	32	3.4%
2025	974	1,008	34	3.5%
2026	1,011	1,045	34	3.4%
2027	1,048	1,084	36	3.4%

Percentage impact would be greater for employers with higher funded ratios.

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ARC Smoothing using a 2% Corridor

- Many benefit programs employ mechanisms to manage contribution volatility. Goal is to reduce contribution volatility while maintaining steady funding progress. State's budget administrator has been briefed on the 2.0% corridor suggested by GRS.
- The ARC is expected to increase by approximately 3.5% per year. The 2.0% corridor will limit annual increases to a range of 1.5% - 5.5%.
- No decision is needed now. GRS will gather feedback from stakeholders. If there are no objections, the Board would adopt the new methodology starting with the 2020 valuation.
- ACT 268 gives the Board significant flexibility with regards to funding policy.
  - ACT 268 requires the smoothed ARC to amortize the unfunded accrued liability over a period of no more than 30 years.

Illustrative ARC Smoothing using a 2% Corridor

($ Thousands)	State of Hawaii	City & County of Honolulu	County of Hawaii	County of Maui	County of Kauai	Kauai - Department of Water	Board of Water Supply - Honolulu	Hawaii Department of Water Supply	HART
(1) FY 2021 ARC	$ 842,456	$ 190,106	$ 42,917	$ 36,984	$ 17,842	$ 1,077	$ 8,452	$ 2,046	$ 818
(2) FY 2022 ARC - Lower Bound (1) * 1.015	855,093	192,958	43,561	37,539	18,110	1,093	8,579	2,077	830
(3) FY 2022 ARC - Upper Bound (1) * 1.055	888,791	200,562	45,277	39,018	18,823	1,136	8,917	2,159	863
(4) FY 2022 ARC without limitation	877,193	197,569	45,147	38,547	18,309	1,143	8,918	2,148	918
(5) Increase without limitation (4)/(1) -1	4.1%	3.9%	5.2%	4.2%	2.6%	**6.1%**	**5.5%**	5.0%	**12.2%**
(6) FY 2022 ARC with limitation	877,193	197,569	45,147	38,547	18,309	1,136	8,917	2,148	863
(7) Increase with limitation (6)/(1) - 1	4.1%	3.9%	5.2%	4.2%	2.6%	**5.5%**	**5.5%**	5.0%	**5.5%**

- If the new methodology were being applied to this year’s results, only three employers would be impacted.
- The decision to adopt the new methodology could be made by each employer.
- The risk of this new methodology is that the smoothed ARC drifts too far away from the traditional ARC. The Board will have the authority to eliminate or change the ARC smoothing in any given year.

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Summary of Benefits

- Employer's Maximum Contribution is a % of the Base Monthly Contribution

Hire Date	Years of Service	% of BMC
Before 7/1/1996	<10 10+	50% 100%
Post 7/1/1996*	< 10 10-14 15-24 25+	0% 50% 75% 100%

*Employees hired after 6/30/2001 only receive the % of the "Self" BMC

- Approximately 70% of current active employees were hired after 6/30/2001. Approximately 7% of current retirees that have medical coverage are receiving less than 100% of the BMC.

- Part B Premium Reimbursement is in addition to the BMC subsidy. The 2020 Part B premium is $145/month for employees enrolling in Part B for the first time or not enrolled in Social Security. The Part B premium reimbursement is provided to both member and spouse regardless of date of hire or service.

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Summary of Benefits

- Plan design considerations:
  - Roughly 87% of the OPEB liability is attributable to the post-65 benefits. 86% of current retirees are over the age of 65.
  - 20% of the liability is attributable to the Part B reimbursement, which is provided to members and spouses regardless of date of hire and years of service.
  - Small changes in premiums for Medicare can have a significant impact on participation.
  - Changes to new hires have a gradual impact; unless they affect behavior of current members.

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2020 Premiums and Base Monthly Contribution (BMC)

- Retiree only coverage (HMSA medical + Rx + dental + vision)

	Premium	100% BMC	75% BMC	50% BMC
Pre-65	$860	$1,015	$761	$507
Post-65	526	723	542	361

- Retiree plus spouse coverage (HMSA medical + Rx + dental + vision)

	Premium	100% BMC	75% BMC	50% BMC
Pre-65	$1,675	$2,045	$1,534	$1,023
Post-65	1,024	1,449	1,087	724

- By statute, the BMC increases at the same rate as Part B premiums; not the EUTF’s premiums. 2020 BMC is 6.7% higher than 2019 BMC.
- Medicare retirees who receive 100% of the BMC are projected to have their premiums 100% paid for in future years.

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Employer Assets for Funding vs. Financial Accounting Purposes

- Beginning with the FYE 2020 GASB reports, which use a 7/1/2019 measurement date, the assets employers reflect in their financial reports will include a portion of the funds in the Operating Asset Pool (OAP).
- As of 7/1/2019, the OAP balance was $212,108,175.
- Because the OAP assets are not dedicated to funding, they are excluded from the funding valuations.
- Due to this difference and the requirement to use the market value of assets for financial reporting purposes, the funded ratio and unfunded liability determined in the funding valuation will be different than the similar metrics prepared for financial reporting.
- Using the State of Hawaii as an example:
  - The funded ratio of 16.1% determined in the funding valuation will correspond to a 17.2% ratio of plan assets to total OPEB Liability in the accounting report.
  - The unfunded accrued liability of $9.55 billion in the funding valuation will correspond to a net OPEB liability of $9.42 billion in the accounting report.

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Disclaimers

- This presentation is intended to be used in conjunction with the July 1, 2019 actuarial valuation. This presentation should not be relied on for any purpose other than the purpose described in the valuation report.
- This presentation shall not be construed to provide tax advice, legal advice or investment advice.

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